



## Complete Summary

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### TITLE

End stage renal disease (ESRD): percentage of adult peritoneal dialysis (PD) patients with weekly  $Kt/V_{urea}$  and creatinine clearance (CrCl) calculated in a standard way.

### SOURCE(S)

Centers for Medicare & Medicaid Services. 2004 Annual Report, End Stage Renal Disease Clinical Performance Measures project. Baltimore (MD): Centers for Medicare & Medicaid Services, Center for Beneficiary Choices; 2004 Dec. 100 p.

### Measure Domain

#### PRIMARY MEASURE DOMAIN

##### Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

#### SECONDARY MEASURE DOMAIN

Does not apply to this measure

### Brief Abstract

#### DESCRIPTION

This measure is used to assess the percentage of adult peritoneal dialysis (PD) patients with all of the following:

- Weekly creatinine clearance (CrCl) normalized to  $1.73 \text{ m}^2$  body surface area (BSA) and total weekly  $Kt/V_{urea}$  used to measure delivered PD dose; and
- Residual renal function (unless negligible\*) is assessed by measuring the renal component of  $Kt/V_{urea}$  and estimating the patient's glomerular filtration rate (GFR) by calculating the mean of urea and CrCl; and
- Total body water (V) estimated by either the Watson or Hume method using actual body weight, and BSA estimated by either the DuBois and DuBois method, the Gehan and George method, or the Haycock method of using actual body weight, during the study period.

\*Negligible is less than 200 mL urine in 24 hours.

## RATIONALE

The ESRD Clinical Performance Measures (CPM) Project is a national effort led by the Centers for Medicare & Medicaid Services (CMS), formerly the Health Care Financing Administration (HCFA), and its eighteen ESRD Networks to assist dialysis providers to improve patient care and outcomes.

The purpose of the ESRD CPM Project is to provide comparative data to ESRD caregivers to assist them in assessing and improving the care provided to dialysis patients.

While significant improvements in care have occurred, the opportunities to improve care for dialysis patients in the U.S. in the areas of adequacy of dialysis, vascular access, and anemia management continue.

## PRIMARY CLINICAL COMPONENT

End stage renal disease (ESRD); Peritoneal dialysis (PD); assessment of delivered dose;  $Kt/V_{urea}$ ; creatinine clearance (CrCl)

## DENOMINATOR DESCRIPTION

All adult (greater than or equal to 18 years old) peritoneal dialysis (PD) patients in the sample for analysis, excluding tidal dialysis patients

## NUMERATOR DESCRIPTION

Number of patients in the denominator with all of the following:

- Weekly creatinine clearance (CrCl) normalized to 1.73 m<sup>2</sup> body surface area (BSA) and total weekly  $Kt/V_{urea}$  used to measure delivered peritoneal dialysis (PD) dose; and
- Residual renal function (unless negligible\*) is assessed by measuring the renal component of  $Kt/V_{urea}$  and estimating the patient's glomerular filtration rate (GFR) by calculating the mean of urea and CrCl; and
- Total body water (V) estimated by either the Watson or Hume method using actual body weight, and BSA estimated by either the DuBois and DuBois method, the Gehan and George method, or the Haycock method of using actual body weight, during the study period\*\*.

\*Negligible is less than 200 mL urine in 24 hours.

\*\*The most recent data collected for the End Stage Renal Disease (ESRD) Clinical Performance Measures (CPM) Project were for the 6 month time period (October 2003 - March 2004) for the PD patients. However, facilities implementing this measure may choose any time period.

## Evidence Supporting the Measure

## EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

## Evidence Supporting Need for the Measure

### NEED FOR THE MEASURE

Use of this measure to improve performance

### EVIDENCE SUPPORTING NEED FOR THE MEASURE

Centers for Medicare & Medicaid Services. 2004 Annual Report, End Stage Renal Disease Clinical Performance Measures project. Baltimore (MD): Centers for Medicare & Medicaid Services, Center for Beneficiary Choices; 2004 Dec. 100 p.

## State of Use of the Measure

### STATE OF USE

Current routine use

### CURRENT USE

External oversight/Medicare  
Internal quality improvement  
National reporting

## Application of Measure in its Current Use

### CARE SETTING

Ambulatory Care  
Home Care

### PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

### LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

### TARGET POPULATION AGE

Age greater than or equal to 18 years

### TARGET POPULATION GENDER

Either male or female

## STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

### Characteristics of the Primary Clinical Component

## INCIDENCE/PREVALENCE

The incidence of treated end stage renal disease (ESRD) in the United States is 333 per million population. As of December 31, 2003, there were 310,095 patients receiving dialysis therapy in the United States.

## EVIDENCE FOR INCIDENCE/PREVALENCE

Centers for Medicare & Medicaid Services. 2004 Annual Report, End Stage Renal Disease Clinical Performance Measures project. Baltimore (MD): Centers for Medicare & Medicaid Services, Center for Beneficiary Choices; 2004 Dec. 100 p.

## ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

## BURDEN OF ILLNESS

Unspecified

## UTILIZATION

Unspecified

## COSTS

Unspecified

### Institute of Medicine National Healthcare Quality Report Categories

## IOM CARE NEED

Living with Illness

## IOM DOMAIN

Effectiveness

## CASE FINDING

Users of care only

## DESCRIPTION OF CASE FINDING

All adult (greater than or equal to 18 years old) peritoneal dialysis (PD) patients in the sample for analysis, excluding tidal dialysis patients

## DENOMINATOR SAMPLING FRAME

Patients associated with provider

## DENOMINATOR INCLUSIONS/EXCLUSIONS

### Inclusions

All adult (greater than or equal to 18 years old) peritoneal dialysis (PD) patients in the sample for analysis

### Exclusions

Exclude tidal dialysis patients

## RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

## DENOMINATOR (INDEX) EVENT

Clinical Condition

Therapeutic Intervention

## DENOMINATOR TIME WINDOW

Time window precedes index event

## NUMERATOR INCLUSIONS/EXCLUSIONS

### Inclusions

Number of patients in the denominator with all of the following:

- Weekly creatinine clearance (CrCl) normalized to 1.73 m<sup>2</sup> body surface area (BSA) and total weekly Kt/V<sub>urea</sub> used to measure delivered peritoneal dialysis (PD) dose; and
- Residual renal function (unless negligible\*) is assessed by measuring the renal component of Kt/V<sub>urea</sub> and estimating the patient's glomerular filtration rate (GFR) by calculating the mean of urea and CrCl; and
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method, the Gehan and George method, or the Haycock method of using actual body weight, during the study period\*\*.

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Exclusions  
Unspecified

#### MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

#### NUMERATOR TIME WINDOW

Fixed time period

#### DATA SOURCE

Medical record

#### LEVEL OF DETERMINATION OF QUALITY

Individual Case

#### PRE-EXISTING INSTRUMENT USED

Unspecified

### Computation of the Measure

#### SCORING

Rate

#### INTERPRETATION OF SCORE

Better quality is associated with a higher score

#### ALLOWANCE FOR PATIENT FACTORS

Unspecified

#### STANDARD OF COMPARISON

External comparison at a point in time  
External comparison of time trends  
Internal time comparison

## Evaluation of Measure Properties

### EXTENT OF MEASURE TESTING

Unspecified

## Identifying Information

### ORIGINAL TITLE

PD adequacy CPM II: calculate weekly  $Kt/V_{\text{urea}}$  and creatinine clearance in a standard way.

### MEASURE COLLECTION

[ESRD Clinical Performance Measures](#)

### MEASURE SET NAME

[Peritoneal Dialysis \(PD\) Adequacy](#)

### DEVELOPER

Centers for Medicare & Medicaid Services

### ADAPTATION

Measure was not adapted from another source.

### RELEASE DATE

1999 Dec

### MEASURE STATUS

This is the current release of the measure.

### SOURCE(S)

Centers for Medicare & Medicaid Services. 2004 Annual Report, End Stage Renal Disease Clinical Performance Measures project. Baltimore (MD): Centers for Medicare & Medicaid Services, Center for Beneficiary Choices; 2004 Dec. 100 p.

### MEASURE AVAILABILITY

The individual measure, "PD Adequacy CPM II: Calculate Weekly  $Kt/V_{urea}$  and Creatinine Clearance in a Standard Way," is published in "2004 Annual Report, End Stage Renal Disease Clinical Performance Measures Project." This document is available in Portable Document Format (PDF) from the [Centers for Medicare and Medicaid Services \(CMS\) Web site](http://www.cms.hhs.gov).

For more information, refer to the CMS Web site at, [www.cms.hhs.gov](http://www.cms.hhs.gov).

#### NQMC STATUS

This NQMC summary was completed by ECRI on July 15, 2005. The information was verified by the measure developer on August 9, 2005.

#### COPYRIGHT STATEMENT

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Date Modified: 9/25/2006

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